

The background of the slide features a silhouette of a family—a woman, a man, and a small child—walking away from the viewer on a beach. They are holding hands and walking towards a bright sunset or sunrise over the ocean. The sky is filled with soft, golden clouds, and the water reflects the light. The overall mood is contemplative and hopeful.

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“Prevention of the Intergenerational Transmission of Maltreatment”

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Goals

- To summarize literature on the sequelae of maltreatment during the early years of life, with a focus on attachment
- To highlight the utility of a DP framework
- To present illustrative results from an attachment-theory informed RCT conducted at MHFC
- To discuss translational research
- Policy Implications and Future Directions

Parents with a history of childhood maltreatment are more likely to demonstrate poor parenting practices or to maltreat their own children, thus sustaining a cycle of abuse and neglect.

(Cort, Toth, Cerulli, & Rogosch, 2011)

Maltreatment and Child Development

- ▶ Young children who have been abused and neglected are at risk for disturbances in many areas of development, including:
 - Emotion Recognition, Expression and Regulation
 - Insecure Attachment
 - Self Development
 - Symbolic Development
 - Moral Development
 - Peer Relationships and Social Information Processing
 - School Adaptation

c.f. Cicchetti and Valentino, 2006

Neurobiological Sequelae of Maltreatment

Physiological Regulation

- ▶ Maltreatment may affect brain volume and development
 - Trauma in early childhood is associated with smaller brain volume
 - Early onset of abuse and longer duration led to smaller volume
 - Children with PTSD have more problematic brain development, especially in boys

- ▶ Maltreatment may affect arousal and reaction to stress
 - Trauma changes stress hormones that may sensitize the system and increase risk of depression

Cicchetti, D., Rogosch, F. A., Gunnar, M. R., & Toth, S. L., 2010; Cicchetti, D., & Rogosch, F. A., 2001

- ▶ Maltreatment affects systems that regulate norepinephrine, serotonin, dopamine, and glucocorticoids

Watts-English, Fortson, Gibler, Hooper, & DeBellis, 2006

Developmental Psychopathology

- ▶ A discipline whose major focus involves elucidating the interplay among biological, psychological, & social contextual aspects of normal and abnormal development
- ▶ A DP perspective is non-deterministic. May move between pathological & nonpathological functioning
- ▶ DP is not limited to children. It is a lifespan perspective and adaptive as well as maladaptive processes can emerge during any developmental period

Prevention and Intervention

- ▶ How can research conceived within a DP framework inform prevention and intervention efforts?
 - If developmental course is altered through intervention, then research has contributed to specifying processes involved in the emergence of maladaptation
 - As such, preventive intervention research can be conceptualized as true experiments in modifying the course of development
 - Resilience research also integral to informing intervention

Why are Relational Interventions Needed?

- ▶ A focus on parent skills training is often insufficient in truly generalizing to the care giving context.
- ▶ If parents have sustained trauma and insensitive care giving during their own childhoods, then they may learn skills & still be unable to implement them with their children.

Beginnings of Attachment

- ▶ Patterns of interaction are established in infancy:
 - To ensure survival
 - To regulate closeness/distance
 - To increase felt security



Attachment is...

- ▶ An evolutionary adaptive emotional tie
- ▶ A reciprocal process by which an emotional connection develops.
- ▶ Infants are biologically predisposed to form attachments. The issue is the quality of these attachments.
- ▶ Attachment behaviors may be adaptive for gaining protection but not adaptive in all situations.



Why does attachment matter?

- ▶ Provides the framework for future relationships
- ▶ Insecure attachment linked with myriad problems in later childhood & adulthood
- ▶ Secure attachments are related with positive developmental attainments

Maltreatment and Attachment

- ▶ Rates of insecure attachment have been found to be as high as 90% in maltreated infants; primarily disorganized types
- ▶ Insecure attachments in maltreated children tend to be stable whereas secure attachments are unstable, highlighting the importance of prevention

Attachment-Theory Informed Interventions

Given the adverse effects of maltreatment on attachment security, intervening in this developmental domain emerges as an important window of opportunity:

- Work with Children in foster care (Dozier, ABC; Fischer)
- Egeland & Erickson's STEEP (Steps Toward Effective/Enjoyable Parenting)
- Fonagy – Integrating psychodynamic theory with empirical research; Parent-Infant Psychotherapy
- Lieberman & VanHorn's work with CPP & Domestic Violence
- Steele & Steele – Intergenerational consequences of attachment
- Marvin – Circle of Security

Child-Parent Psychotherapy (CPP)

- ▶ CPP is a relationship-based form of intervention that focuses on child-parent interaction within a dyadic format.
- ▶ The theoretical target of CPP is the web of jointly constructed meanings in the child-parent relationship, which emerge from each partner's mental representations of self and other (Lieberman et al., 2000).

Child-Parent Psychotherapy (conceptualization)

- ◆ Rooted in psychodynamic theory
- ◆ Origins in the work of Selma Fraiberg
(Ghosts in the Nursery, 1975)
- ◆ Maternal past can affect Mother-Child relationship
- ◆ Joint observation of Mother-Child dyad provides insights into the influence of maternal representations on parenting
- ◆ Non-didactic, although developmental guidance is utilized as needed.



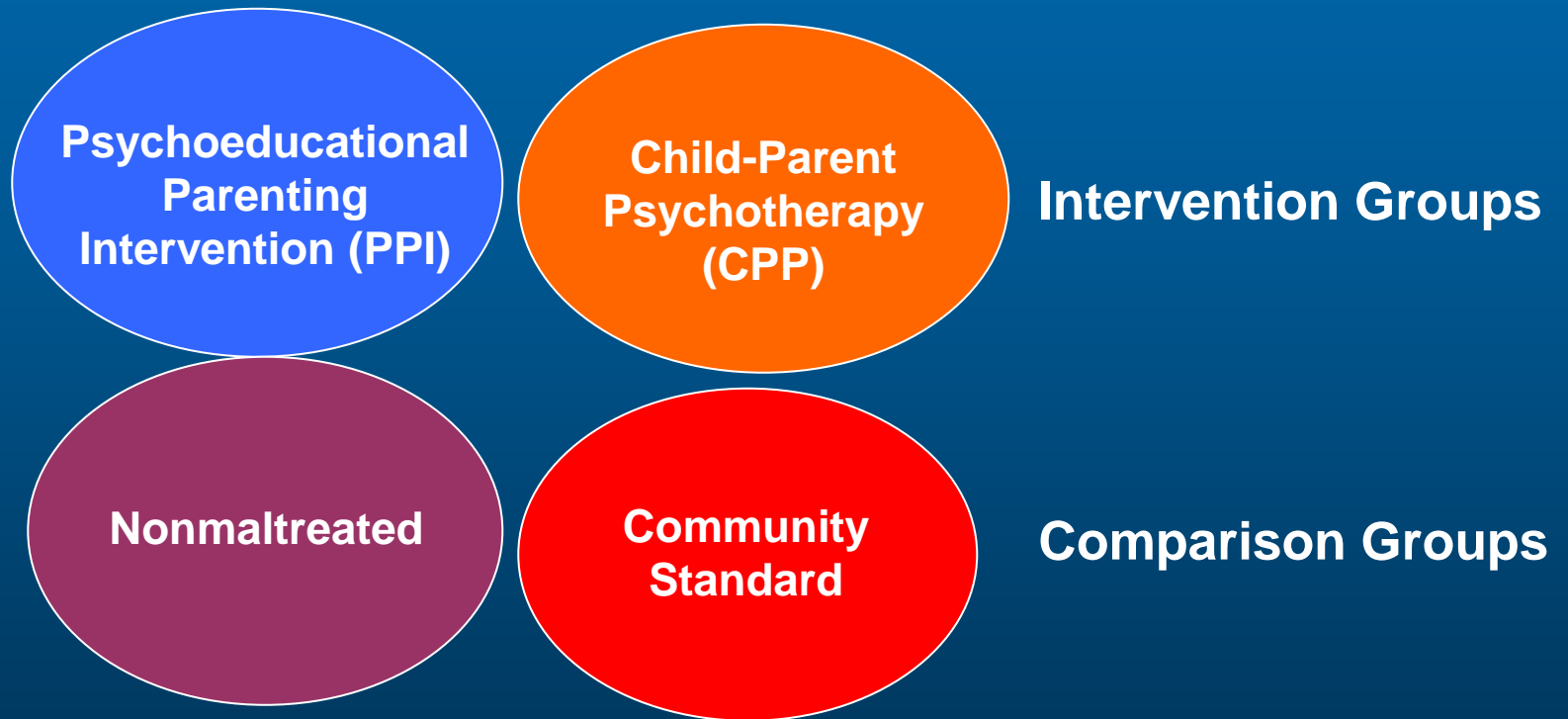
Child-Parent Psychotherapy

- ▶ What predicts whether the parent's past will be repeated with the child?
 - Repression and isolation of the affect associated with childhood suffering
 - Remembering saves the parent from repeating the past
 - Remembering trauma allows the parent to identify with the child rather than the aggressor

Preventive Intervention for Maltreated Infants

- ▶ Funding was received from NIMH to evaluate the efficacy of two competing preventive interventions in fostering adaptive development and reducing risk for psychopathology in maltreated infants.
 - Child-Parent Psychotherapy (CPP)
 - Psychoeducational Parenting Intervention (PPI)

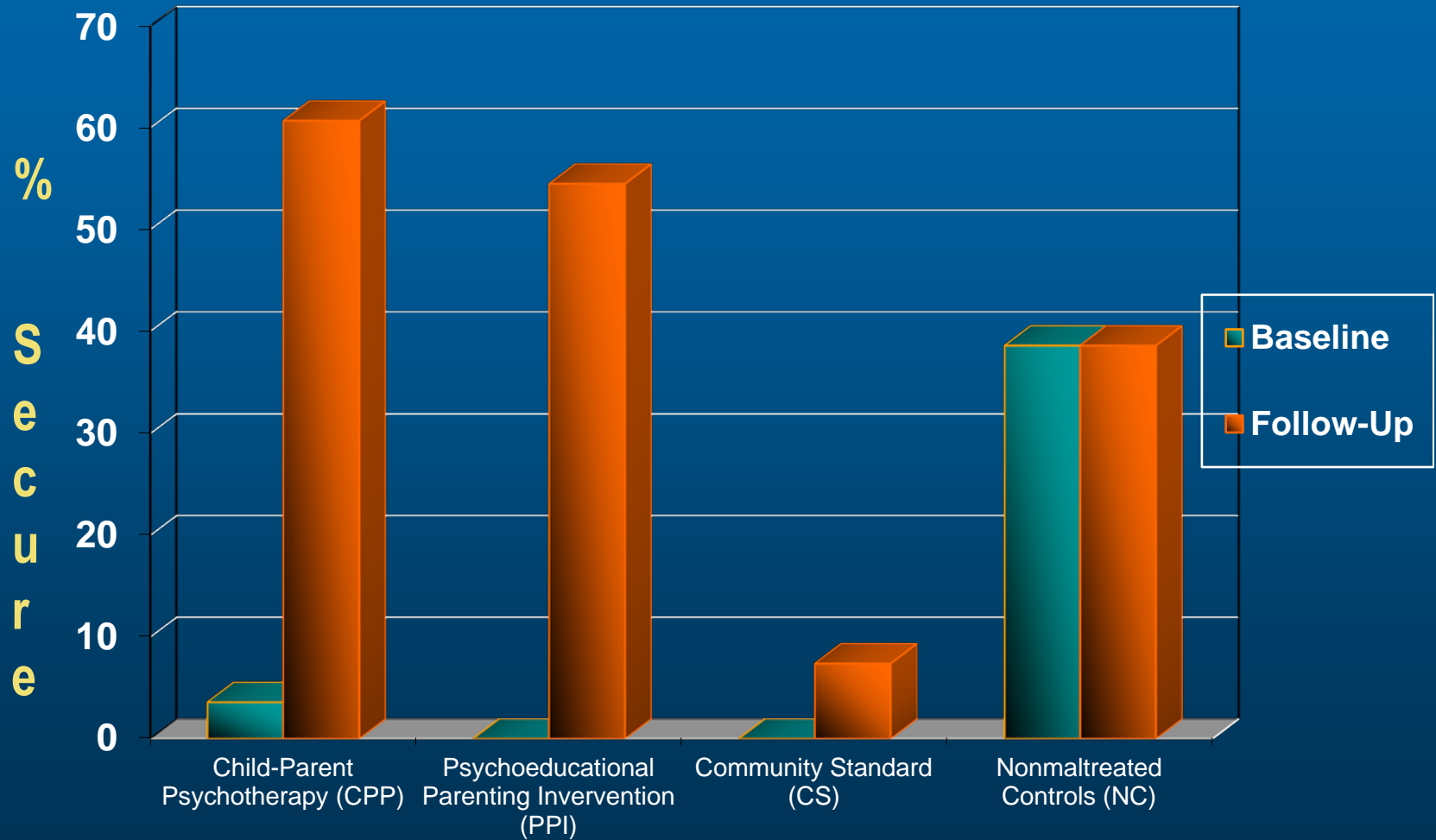
Groups



Design

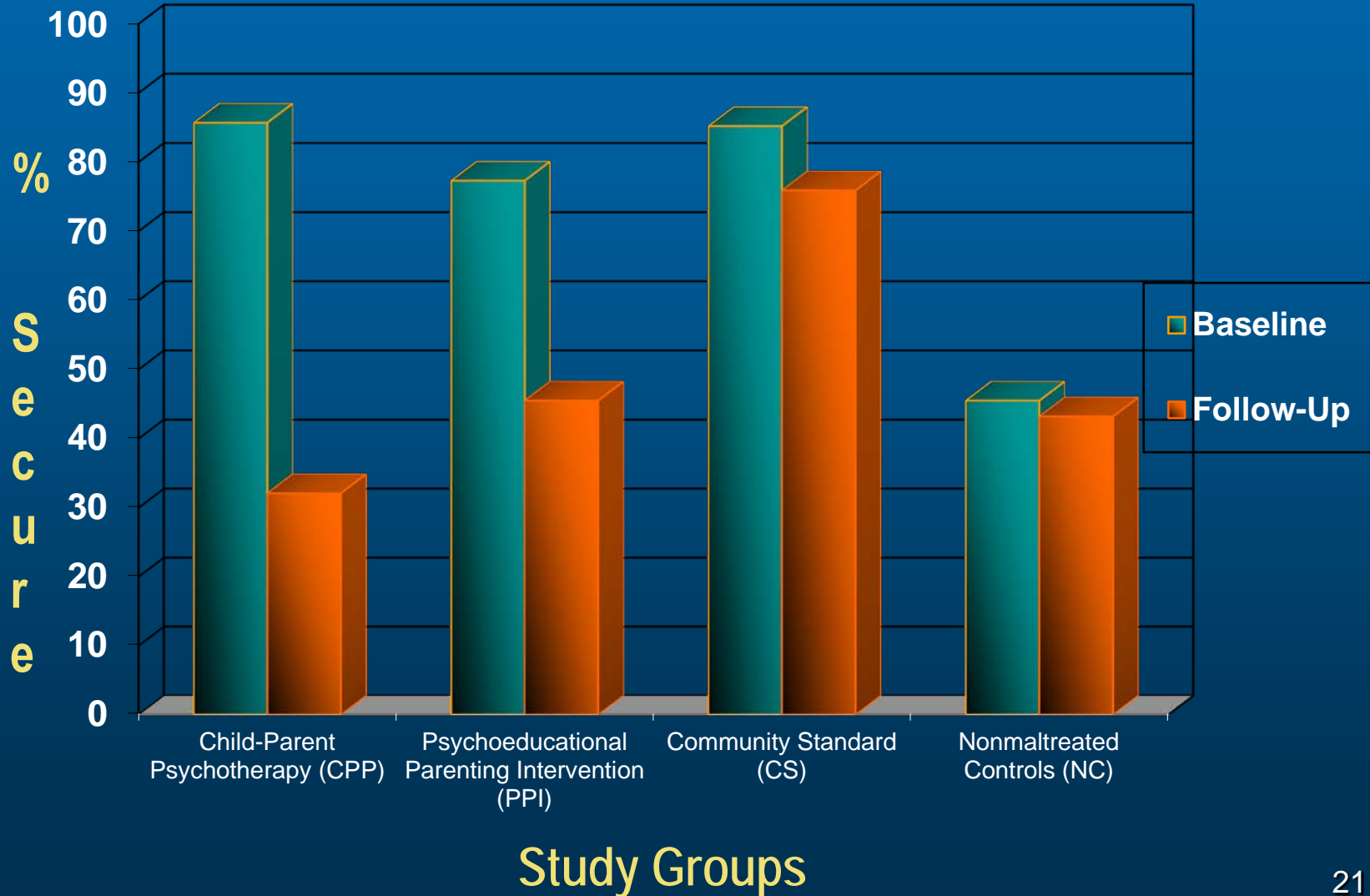
- ▶ Infants were assessed from age 1 to 3 years at:
 - pre-(13 months)
 - mid-(19 months)
 - post-(26 months) and
 - 1 year post-intervention (38 months)

Percentage of *secure* attachments in four study groups at baseline and follow-up



Study Groups

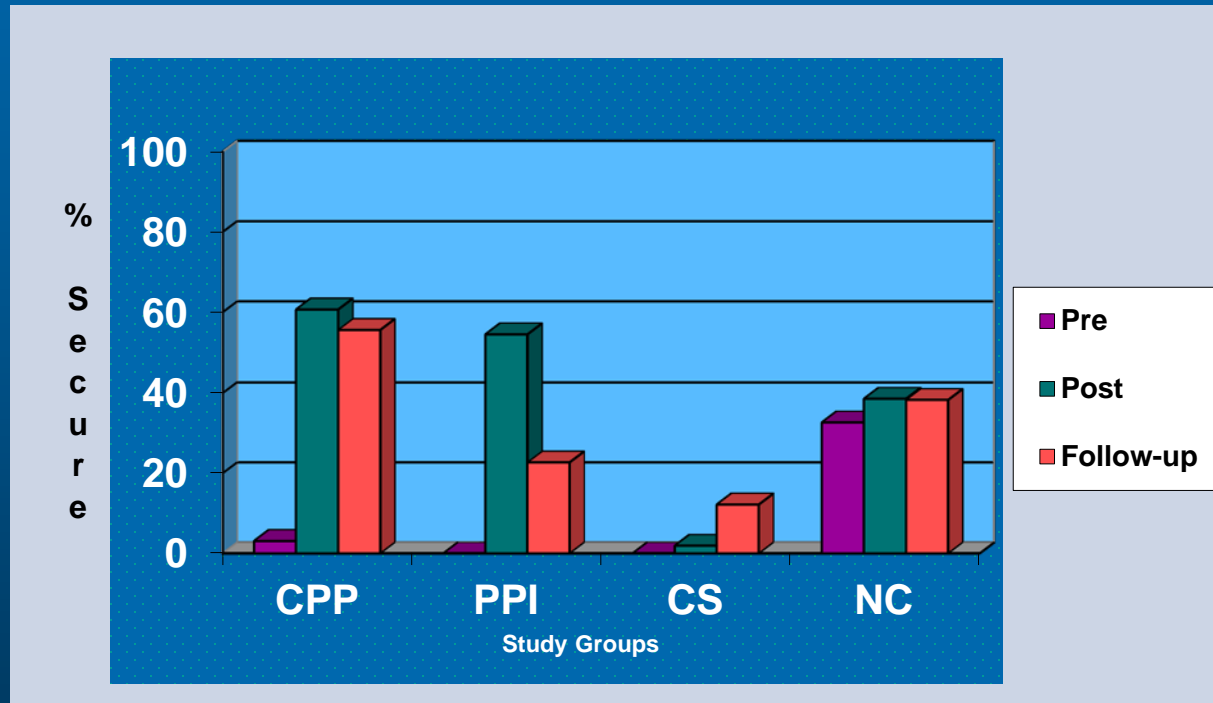
Percentage of *disorganized-disoriented* attachments in four study groups at baseline and follow-up



One Year Follow-Up

At 38 months of age, one year after the intervention, only children in CPP were found to have sustained secure attachment.

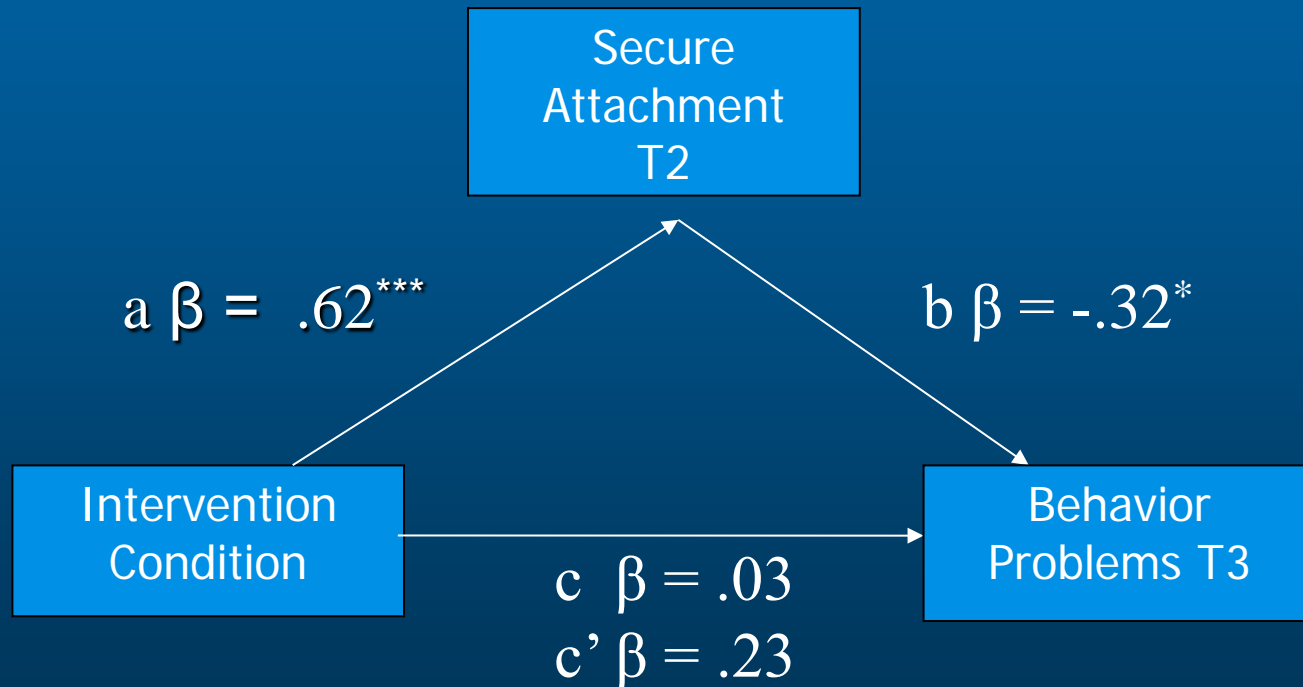
(Stronach, Toth, Rogosch, Sturm & Cicchetti, 2013)



The Percentage of Secure Attachment at pre-intervention, post-intervention, and follow-up for Intervention Groups Note: CPP = Child-parent psychotherapy. PPI = Psychoeducational parenting intervention. CS = Community standard. NC = Nonmaltreated comparison.

Child Behavior Problems

Regardless of CPP or PPI, secure attachment moderated behavior problems.



Note: For active intervention, receipt of either child-parent psychotherapy or psychoeducational parenting intervention was coded “1”, receipt of community standard intervention was coded “0”. Standardized regression coefficients are shown. * $p < .05$, *** $p < .001$.

Normalization of Cortisol Regulation

- At baseline no differences among groups in AM cortisol
- Beginning at mid-intervention, divergence occurred with CPP & PPI comparable to NC group; CS evidenced lower levels of AM cortisol

Cicchetti, D., Rogosch, F. A., Toth, S. L., & Sturge-Apple, M. L. (2011). Normalizing the development of cortisol regulation in maltreated infants through preventive interventions. *Development and Psychopathology*, 23, 789-800.

Genetic Moderation of Intervention

- ▶ Examined serotonin transporter linked promoter region (5-HTTLPR) and dopamine receptor D4 (DRD4) genes
- ▶ Genetic variation did not affect attachment security in maltreated infants but it did in nonmaltreated infants
- ▶ Interventions were efficacious irrespective of genetic variation

Cicchetti, D., Rogosch, F. A., & Toth, S. L. (2011). The effects of child maltreatment and polymorphisms of the serotonin transporter and dopamine D4 receptor genes on infant attachment and intervention efficacy. *Development and Psychopathology*, 23, 357-372.

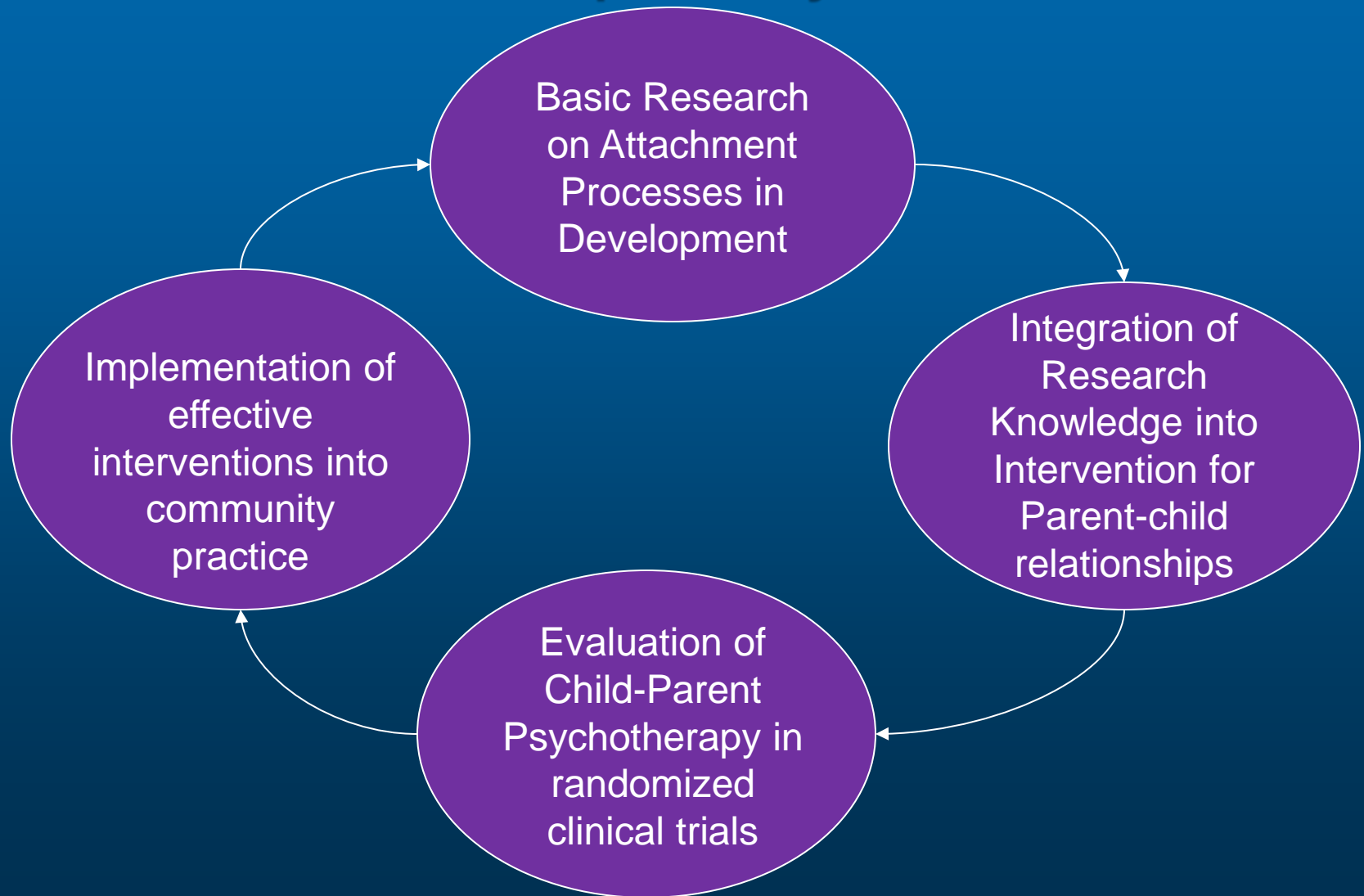
Summary: Treatment Outcomes

- ▶ Evidence-based treatments derived from attachment theory are available for children who have been maltreated
- ▶ Preventive interventions for maltreated infants and preschoolers have been shown to be efficacious in promoting secure attachment
- ▶ Normalization of cortisol occurs as a function of intervention (see also, Fisher, Dozier)
- ▶ Negative effects of maltreatment are not immutable & plasticity of attachment is possible

Next Steps: Translation

- ▶ Once efficacy has been established, it is critical that these preventive interventions be exported to the clinical world more broadly
- ▶ Unfortunately, evidence-based modalities continue to be all too scarce in non-University settings

Translational Research: Attachment Research to Randomized Clinical Trials at Mt. Hope Family Center



Building Healthy Children (BHC)

“It is easier to build strong children than to repair broken men.”

-- *Frederick Douglass*



An initiative funded by the Monroe County Department of Human Services and the United Way are helping the Rochester community to make important strides toward translating efficacy findings, thereby increasing access to evidence-based prevention programs for traumatized children.

Building Healthy Children

- ▶ Targets mothers who had a child before age 21 years; residing in poverty
- ▶ Recruited through Pediatrics Department

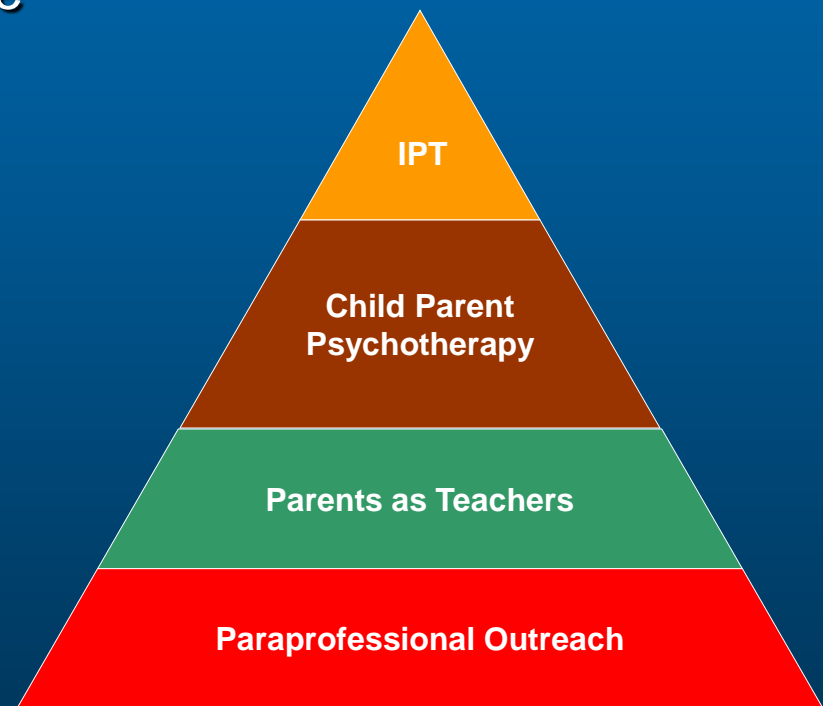


Risk Factors Identified for Participating Families

- ▶ 46% have domestic violence within their current relationship
- ▶ 29% have depressive symptoms
- ▶ 18% have a current or past criminal history
- ▶ 37% have an indicated CPS report as a child
- ▶ 20% report a history of sexual abuse

Building Healthy Children Services

- ▶ Conceptualized as a tiered service pyramid, from global to more specialized & targeted
- ▶ Base of pyramid involves Home Visitation (paraprofessional outreach workers) to identify needs, provide assistance in linking with services, & to be culturally competent & sensitive
- ▶ This is the constant throughout program involvement



Results to Date

Decreased

- depression
- parental rigidity
- child abuse potential
- difficulty in social relationships
- perceived loneliness

Increased

- rates of immunizations & well baby visits
- emotional stability
- social support from family members

Paradis, H. A., Sandler, M., Manly, J. T. & Valentine, L. (2013). Building Healthy Children: Evidence-based home visitation integrated with pediatric medical homes. *Pediatrics*, 132, S174-S179.

Policy implications

- ▶ Evidence-based interventions are available and their provision can foster positive socioemotional and neurobiological outcomes in maltreated infants
- ▶ Preventive interventions should consider utility for policy when being designed
- ▶ Researchers need to disseminate findings more broadly and in ways likely to be assimilable by policy makers

Future Directions

(Toth & Cicchetti, 2013)

- ▶ DP informed studies have largely neglected the period between adolescence and adulthood (early experience likely moderated by later experience)
- ▶ Need for more multi-level investigations of treatment outcome with integration of neurobiological and psychological systems
- ▶ Dissemination of evidence based models and effectiveness studies must be increased
- ▶ Need more studies on sequelae of maltreatment & treatment outcome in middle & upper class families

"The gap between
what we know
and what we do
is lethal."

Kay Redfield Jamison, *Night Falls Fast*



Collaborators

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“It takes a Village”

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